

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application No.: 10/057,259
Filed: October 25, 2001
Inventor(s):
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Title: METHOD AND APPRATUS
FOR MANAGING DATA
TIME OUTS

§ Examiner: Bhatia, Ajay M.
§ Group/Art Unit: 2145
§ Atty. Dkt. No: 5681-49700
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Erik A. Heter
Printed Name
Signature
March 30, 2006
Date

FEE AUTHORIZATION

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

The Commissioner is hereby authorized to charge the following fee to Meyertons, Hood, Kivlin, Kowert & Goetzel, P.C. Deposit Account Number 50-1505/5681-49700/EAH:

Fee: Appeal Brief
Amount: \$500.00
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The Commissioner is also authorized to charge any extension fee or other fees which may be necessary to the same account number.

Respectfully submitted,

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I. REAL PARTY IN INTEREST

The subject application is owned by Sun Microsystems, Inc., a corporation organized and existing under and by virtue of the laws of the State of Delaware, and having its principal place of business at 901 San Antonio Road, Palo Alto, California 94303, as evidenced by the assignment recorded at Reel 012536, Frame 0855.

II. RELATED APPEALS AND INTERFERENCES

No other appeals or interferences are known which would directly affect or be directly affected by or have a bearing on the Board's decision in this appeal.

III. STATUS OF CLAIMS

Claims 1-43 are pending in the present application. Claims 1-43 stand finally rejected and are the subject of this appeal. A clean copy of claims 1-43, as on appeal (incorporating all amendments), is included in the Appendix hereto.

IV. STATUS OF AMENDMENTS

No amendment to the claims has been filed subsequent to the final rejection. The Appendix hereto reflects the current state of the rejected claims.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Independent claim 1 is directed toward an apparatus comprising a scoreboard (Fig. 4, 400, paragraph [0039] of corresponding U.S. patent application publication 2003/0084364, hereafter 'publication'). The scoreboard includes a plurality of locations (Fig. 4, 410(1-m), paragraphs [0039] and [0040], publication) adapted to store transaction identifiers each associated with a transaction, wherein each transaction identifier includes a first timer flag (Fig. 4, 413(1-m)) and a second timer flag (Fig. 4, 414(1-m)). The

apparatus further includes a device (SDI 385, Fig. 3 and Fig. 4, paragraph [0045], publication) adapted to manage the plurality of transaction identifiers in the scoreboard.

Independent claim 13 is directed toward an apparatus including a scoreboard (Fig. 4, 400, paragraph [0039], publication). The scoreboard includes a plurality of locations (Fig. 4, 410(1-m), paragraphs [0039] and [0040], publication) adapted to store transaction identifiers each associated with a transaction, wherein each transaction identifier includes a first timer flag (Fig. 4, 413(1-m)) and a second timer flag (Fig. 4, 414(1-m)). The apparatus further includes a timer (Fig. 4, 450, paragraph [0044], publication) adapted to compare the length of time the transaction identifiers remain in the scoreboard to a predetermined latency period. The apparatus further includes a fill-code generator (Fig. 4, 490, paragraphs [0045] and [0051], publication) adapted to initiate a time-out sequence when notified that at least one transaction identifier has remained in the scoreboard for substantially longer than the predetermined latency period.

Independent claim 19 is directed to a method comprising storing at least one transaction identifier in one of a plurality of locations (i.e. locations 410(1-m), Fig. 4) in a scoreboard (Fig. 4, 400, paragraph [0039], publication). The at least one transaction identifier is associated with a transaction, wherein each transaction comprises a first client (Fig. 4, 420, identified by one of the client tags 412(1-m) in Fig. 4) sending a request to a second client (Fig. 4, 430, identified by one of client ID's 411(1-m) in Fig. 4). Each transaction identifier includes a first timer flag Fig. 4, 413(1-m)) and a second timer flag (Fig. 4, 414(1-m)). The method further includes timing a selected duration (Fig. 5, 550, 560, 570, paragraphs [0046] and [0047], publication). The method further includes initiating a time-out sequence (Fig. 6, 625, 630-655, paragraphs [0050] and [0051], publication) if the selected duration is substantially longer than a predetermined latency period.

Independent claim 31 is directed to a method comprising storing at least one transaction identifier in one of a plurality of locations (i.e. locations 410(1-m), Fig. 4) in a

scoreboard (Fig. 4, 400, paragraph [0039], publication). The at least one transaction identifier is associated with a transaction, wherein each transaction comprises a first client (Fig. 4, 420, identified by one of the client tags 412(1-m) in Fig. 4) sending a request to a second client (Fig. 4, 430, identified by one of client ID's 411(1-m) in Fig. 4). Each transaction identifier includes a first timer flag Fig. 4, 413(1-m)) and a second timer flag (Fig. 4, 414(1-m)). The method further comprises detecting approximately synchronously any transaction identifiers that have been stored in the scoreboard during the previous period of a free-running timer (Fig. 5, 520, paragraph [0047], publication), wherein the free-running timer has a period approximately equal to a predetermined latency period. The method further includes determining approximately synchronously when at least one transaction identifier has been stored in the scoreboard for substantially longer than one cycle of the free-running timer (Fig. 5, 550, paragraph [0047], publication). The method then may initiate approximately synchronously a time-out sequence if the transaction identifier remains in the scoreboard substantially longer than a predetermined latency period (Fig. 6, 625, 630-655, paragraph [0051], publication).

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Claims 1-43 are rejected under 35 U.S.C. § 102(e) as being anticipated by Eden (U.S. Patent Application Publication Number 2002/0184361).

VII. ARGUMENT

A. Claims 1-12 and 38-40

The Examiner rejected claims 1-12 and 38-40 as being anticipated by Eden under 35 U.S.C. § 102(e). Appellants respectfully traverse this rejection in light of the following remarks.

Appellant's independent claim 1 recites:

“An apparatus, comprising:

a scoreboard comprising a plurality of locations adapted to store transaction identifiers each associated with a transaction, wherein each transaction comprises a first client sending a request to a second client, and wherein each transaction identifier includes a first timer flag and a second timer flag; and

a device adapted to manage the plurality of transaction identifiers in the scoreboard” (Emphasis added).

Contrary to the Examiner's assertions, Eden does not teach or suggest all the features of claim 1. In particular, Eden does not teach or suggest “a scoreboard comprising a plurality of locations adapted to store transaction identifiers each associated with a transaction ... wherein each transaction identifier includes a first timer flag and a second timer flag” as recited in claim 1.

In the final office action, the Examiner contends that paragraph [0032] of Eden teaches transaction identifiers as device names. However, nowhere in paragraph [0032] does Eden provide any teaching or suggestion that the identifiers discussed therein are associated with anything other than a device. More particularly, the identifiers discussed in paragraph [0032] of Eden are directed to an identification of a device, a type of device, and the availability of the device. Thus, each of the device names taught by Eden is

associated with a device, in contrast to the transaction identifiers as recited in claim 1, each of which is associated with a transaction. In the advisory action, the Examiner contends that queries, as discussed by Eden, are transactions according to page 8, lines 21-22 of Appellant's specification. The Examiner further contends that a query meets the definition of a transaction "since it is a communication between the device and a device." However, regardless of how transactions are defined, it does not change the fact that the device names of Eden are each associated with a device, rather than being associated with a particular query or transaction, as are the transaction identifiers recited in claim 1.

The Examiner has further failed to point out how the device names of Eden include a first timer flag and a second timer flag. The Examiner contends this feature is taught in paragraph [0034] of Eden. Paragraph [0034] is directed toward a timer which is started at the beginning of a network query, wherein if the timeout period expires before a query reply is received from the network connected device, the particular device is determined to be unavailable. However, the Examiner has not specified as to how the device names taught by Eden actually include the first and second timer flags. Appellant can find no teaching or suggestion in Eden of the device names including first and second timer flags, and therefore submits that Eden clearly fails to teach transaction identifiers each associated with a transaction, each including a first timer flag and a second timer flag.

The Examiner further contends that in paragraph [0030] Eden teaches a device adapted to manage a plurality of transaction identifiers. However, as Appellant noted in the response to the final office action, paragraph [0030] of Eden is directed toward a querying device which builds a GUI representing the availability of network devices. The Examiner contends that the querying device is the device adapted to manage the scoreboard. However, other than determining the availability of the network connecting devices, Appellant can find no teaching or suggestion anywhere in Eden as to how the querying device manages the alleged scoreboard of Eden. Furthermore, as noted above, Eden does not teach or suggest transaction identifiers, each associated with a transaction.

As such, Appellant can find no teaching or suggestion in paragraph [0030] or elsewhere in Eden wherein the querying device manages a plurality of transaction identifiers in the scoreboard. Appellant notes that the Examiner did not address this argument in the advisory action.

In light of the above remarks, Appellant respectfully submits that a case of anticipation has not been established and therefore the Examiner's rejection of claim 1 is erroneous. Accordingly, reversal of the Examiner's decision is respectfully requested.

B. Claims 13-18 and 41-43

The Examiner rejected claims 13-18 and 41-43 as being anticipated by Eden under 35 U.S.C. § 102(e). Appellants respectfully traverse this rejection in light of the following remarks.

Independent claim 13 recites:

“An apparatus, comprising:

a scoreboard comprising a plurality of locations adapted to store transaction identifiers each associated with a transaction, wherein each transaction comprises a first client sending a request to a second client, and wherein each transaction identifier includes a first timer flag and a second timer flag;

a timer adapted to compare the length of time the transaction identifiers remain in the scoreboard to a predetermined latency period; and

a fill-code generator adapted to initiate a time-out sequence when notified that at least one transaction identifier has remained in the scoreboard for substantially longer than the predetermined latency period” (Emphasis added).

Contrary to the Examiner's assertions, Eden does not teach or suggest all the features of claim 13. In particular, Eden does not teach or suggest "a scoreboard comprising a plurality of locations adapted to store transaction identifiers each associated with a transaction ... wherein each transaction identifier includes a first timer flag and a second timer flag" as recited in claim 1.

In the final office action, the Examiner contends that paragraph [0032] of Eden teaches transaction identifiers as device names. However, nowhere in paragraph [0032] does Eden provide any teaching or suggestion that the identifiers discussed therein are associated with anything other than a device. More particularly, the identifiers discussed in paragraph [0032] of Eden are directed to an identification of a device, a type of device, and the availability of the device. Thus, each of the device names taught by Eden is associated with a device, in contrast to the transaction identifiers as recited in claim 13, each of which is associated with a transaction. In the advisory action, the Examiner contends that queries, as discussed by Eden, are transactions according to page 8, lines 21-22 of Appellant's specification. The Examiner further contends that a query meets the definition of a transaction "since it is a communication between the device and a device." However, regardless of how transactions are defined, it does not change the fact that the device names of Eden are each associated with a device, rather than being associated with a particular query or transaction, as are the transaction identifiers recited in the independent claims.

The Examiner has further failed to point out how the device names of Eden include a first timer flag and a second timer flag. The Examiner contends this feature is taught in paragraph [0034] of Eden. Paragraph [0034] is directed toward a timer which is started at the beginning of a network query, wherein if the timeout period expires before a query reply is received from the network connected device, the particular device is determined to be unavailable. However, the Examiner has not specified as to how the device names taught by Eden actually include the first and second timer flags. Appellant can find no teaching or suggestion in Eden of the device names including first and second

timer flags, and therefore submits that Eden clearly fails to teach transaction identifiers each associated with a transaction, each including a first timer flag and a second timer flag.

The Examiner contends that Eden teaches a timer adapted to compare the length of time the transaction identifiers remain in the scoreboard to a predetermined latency period. However, as previously noted, the Examiner has equated the transaction identifiers recited in claim 13 to the device names of Eden. Appellant notes that the device names of Eden remain displayed in the GUI indefinitely in order to provide an indication of the availability of their respective devices. Accordingly, Appellant submits that Eden does not teach a timer adapted to compare the length of time the transaction identifiers remain in the scoreboard to a predetermined latency period, as there would be no need to compare the length of time the device names of Eden remain displayed in the GUI with any predetermined latency period since the device names are always present therein.

The Examiner further contends that Eden teaches, in paragraphs [0049] and [0050], a fill-code generator as recited in claim 13. However, neither of these paragraphs teaches or suggests a fill-code generator as recited in claim 13. Paragraphs [0049] and [0050] of Eden are directed towards the querying of a network device and changing a GUI displaying the associated device name if the device is available. However, Eden provides no teaching, in paragraphs [0049], [0050], or elsewhere of a fill-code generator adapted to initiate a time-out sequence when notified that at least one transaction identifier has remained in the scoreboard for substantially longer than the predetermined latency period as recited in claim 13. Furthermore, since the GUI of Eden displays a device name whether or not a device is available, there is no need to initiate a time-out sequence if the device name has been displayed by the GUI for longer than a given time, such as a predetermined latency period.

In light of the above remarks, Appellant respectfully submits that a case of anticipation has not been established and therefore the Examiner's rejection of claim 13 is erroneous. Accordingly, reversal of the Examiner's decision is respectfully requested.

C. **Claims 19-30**

The Examiner rejected claims 19-30 as being anticipated by Eden under 35 U.S.C. § 102(e). Appellants respectfully traverse this rejection in light of the following remarks.

Independent claim 19 recites:

“A method, comprising:

storing at least one **transaction identifier** in at least one of a plurality of locations in a scoreboard, wherein the at least one transaction identifier is associated with **a transaction**, wherein each transaction comprises a first client sending a request to a second client in a system, and wherein each transaction identifier includes a first timer flag and a second timer flag;
timing a selected duration; and
initiating a time-out sequence if the selected duration is substantially longer than a predetermined latency period” (Emphasis added).

Contrary to the Examiner's assertions, Eden does not teach or suggest all the features of claim 19. In particular, Eden does not teach or suggest “storing at least one **transaction identifier** in at least one of a plurality of locations in a scoreboard, wherein the at least one transaction identifier is associated with **a transaction** ... storing at least one **transaction identifier** in at least one of a plurality of locations in a scoreboard, wherein the at least one transaction identifier is associated with **a transaction**” as recited in claim 19.

In the final office action, the Examiner contends that paragraph [0032] of Eden teaches transaction identifiers as device names. However, nowhere in paragraph [0032]

does Eden provide any teaching or suggestion that the identifiers discussed therein are associated with anything other than a device. More particularly, the identifiers discussed in paragraph [0032] of Eden are directed to an identification of a device, a type of device, and the availability of the device. Thus, each of the device names taught by Eden is associated with a device, in contrast to the transaction identifiers as recited in claim 19, each of which is associated with a transaction. In the advisory action, the Examiner contends that queries, as discussed by Eden, are transactions according to page 8, lines 21-22 of Appellant's specification. The Examiner further contends that a query meets the definition of a transaction "since it is a communication between the device and a device." However, regardless of how transactions are defined, it does not change the fact that the device names of Eden are each associated with a device, rather than being associated with a particular query or transaction, as are the transaction identifiers recited in claim 19.

The Examiner has further failed to point out how the device names of Eden include a first timer flag and a second timer flag. The Examiner contends this feature is taught in paragraph [0034] of Eden. Paragraph [0034] is directed toward a timer which is started at the beginning of a network query, wherein if the timeout period expires before a query reply is received from the network connected device, the particular device is determined to be unavailable. However, the Examiner has not specified as to how the device names taught by Eden actually include the first and second timer flags. Appellant can find no teaching or suggestion in Eden of the device names including first and second timer flags, and therefore submits that Eden clearly fails to teach transaction identifiers each associated with a transaction, each including a first timer flag and a second timer flag.

In light of the above remarks, Appellant respectfully submits that a case of anticipation has not been established and therefore the Examiner's rejection of claim 19 is erroneous. Accordingly, reversal of the Examiner's decision is respectfully requested.

D. Claims 31-37

The Examiner rejected claims 31-37 as being anticipated by Eden under 35 U.S.C. § 102(e). Appellants respectfully traverse this rejection in light of the following remarks.

Independent claim 31 recites:

“A method, comprising:

storing at least one transaction identifier in at least one of a plurality of locations in a scoreboard, wherein the at least one transaction identifier is associated with a transaction, wherein each transaction comprises a first client requesting data from a second client in a system, and wherein each transaction identifier includes a first timer flag and a second timer flag;
detecting approximately synchronously transaction identifiers that have been stored in the scoreboard during the previous period of a free-running timer having a period approximately equal to a predetermined latency period;
determining approximately synchronously when at least one of the transaction identifiers has been stored in the scoreboard for substantially longer than one cycle of the free-running timer;
and initiating approximately synchronously a time-out sequence if the transaction identifier remains in the scoreboard substantially longer than a predetermined latency period” (Emphasis added).

Contrary to the Examiner’s assertions, Eden does not teach or suggest all the features of claim 31. In particular, Eden does not teach or suggest “storing at least one transaction identifier in at least one of a plurality of locations in a scoreboard, wherein the at least one transaction identifier is associated with a transaction ... storing at least one transaction identifier in at least one of a plurality of locations in a scoreboard, wherein the at least one transaction identifier is associated with a transaction” as recited in claim 31.

In the final office action, the Examiner contends that paragraph [0032] of Eden teaches transaction identifiers as device names. However, nowhere in paragraph [0032] does Eden provide any teaching or suggestion that the identifiers discussed therein are associated with anything other than a device. More particularly, the identifiers discussed in paragraph [0032] of Eden are directed to an identification of a device, a type of device, and the availability of the device. Thus, each of the device names taught by Eden is associated with a device, in contrast to the transaction identifiers as recited in claim 31, each of which is associated with a transaction. In the advisory action, the Examiner contends that queries, as discussed by Eden, are transactions according to page 8, lines 21-22 of Appellant's specification. The Examiner further contends that a query meets the definition of a transaction "since it is a communication between the device and a device." However, regardless of how transactions are defined, it does not change the fact that the device names of Eden are each associated with a device, rather than being associated with a particular query or transaction, as are the transaction identifiers recited in claim 19.

The Examiner has further failed to point out how the device names of Eden include a first timer flag and a second timer flag. The Examiner contends this feature is taught in paragraph [0034] of Eden. Paragraph [0034] is directed toward a timer which is started at the beginning of a network query, wherein if the timeout period expires before a query reply is received from the network connected device, the particular device is determined to be unavailable. However, the Examiner has not specified as to how the device names taught by Eden actually include the first and second timer flags. Appellant can find no teaching or suggestion in Eden of the device names including first and second timer flags, and therefore submits that Eden clearly fails to teach transaction identifiers each associated with a transaction, each including a first timer flag and a second timer flag.

The Examiner contends that Eden teaches detecting approximately synchronously transaction identifiers that have been stored in the scoreboard during the previous period

of a free-running timer having a period approximately equal to a predetermined latency period. The Examiner also contends that Eden teaches determining approximately synchronously when at least one of the transaction identifiers has been stored in the scoreboard for substantially longer than one cycle of the free-running timer. However, as previously noted, the Examiner has equated the transaction identifiers recited in claim 31 with the device names of Eden. Appellant notes that the device names of Eden remain displayed in the GUI indefinitely in order to provide an indication of the availability of their respective devices. Accordingly, Appellant submits that Eden does not teach or suggest detecting approximately synchronously transaction identifiers that have been stored in the scoreboard during the previous period of a free-running timer having a period approximately equal to a predetermined latency period, or determining approximately synchronously when at least one of the transaction identifiers has been stored in the scoreboard for substantially longer than one cycle of the free-running timer, as there would be no need to compare the length of time the device names of Eden remain displayed in the GUI with any period of time, including a predetermined latency period, since the device names are always present in the GUI.

The Examiner further contends that Eden teaches in paragraph [0032] initiating approximately synchronously a time-out sequence if the transaction identifier remains in the scoreboard substantially longer than a predetermined latency period. However, paragraph [0032] of Eden is directed toward a GUI that displays the names of devices attached to a network with indications as to whether or not the devices are available. Furthermore, paragraph [0032] of Eden states that the querying device initially represents each of the known network-connected devices as unavailable. Nowhere in paragraph [0032] does Eden teach or suggest transaction identifiers as recited in claim 31, nor does paragraph [0032] of Eden teach or suggest initiating approximately synchronously a time-out sequence if the transaction identifier remains in the scoreboard substantially longer than a predetermined latency period. In fact, as noted above, Appellant believes the device names of Eden to be displayed indefinitely in the GUI taught therein, regard of

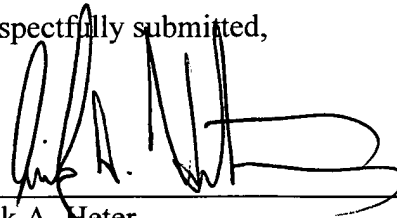
whether or not they are available, and thus submits there would be no reason to determine the length of time a device name had remained in the GUI.

In light of the above remarks, Appellant respectfully submits that a case of anticipation has not been established and therefore the Examiner's rejection of claim 31 is erroneous. Accordingly, reversal of the Examiner's decision is respectfully requested.

VII. CONCLUSION

For the foregoing reasons, it is submitted that the Examiner's rejection of claims 1-43 was erroneous, and reversal of his decision is respectfully requested.

Respectfully submitted,



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IX. APPENDIX

The claims on appeal are as follows.

1. An apparatus, comprising:
a scoreboard comprising a plurality of locations adapted to store transaction identifiers each associated with a transaction, wherein each transaction comprises a first client sending a request to a second client, and wherein each transaction identifier includes a first timer flag and a second timer flag; and
a device adapted to manage the plurality of transaction identifiers in the scoreboard.
2. The apparatus of claim 1, wherein the device comprises a timer adapted to, approximately synchronously compare the length of time the transaction identifiers remain in the scoreboard to a predetermined latency period.
3. The apparatus of claim 2, wherein the timer is a free-running timer.
4. The apparatus of claim 3, wherein the free-running timer is a cyclical free-running timer adapted to return to a zero-point after the predetermined latency period.
5. The apparatus of claim 4, wherein the predetermined latency period ranges approximately from 6 nanoseconds to 28 seconds.
6. The apparatus of claim 2, wherein the device further comprises a fill-code generator adapted to initiate a time-out sequence.
7. The apparatus of claim 6, wherein the fill-code generator is adapted to initiate the time-out sequence when the timer notifies the fill-code generator that at least one

of the transaction identifiers has remained in the scoreboard longer than the predetermined latency period.

8. The apparatus of claim 7, wherein the fill-code generator is adapted to create a fill code and transmit the fill code to the first client when notified that at least one of the transaction identifiers has remained in the scoreboard longer than the predetermined latency period.
9. The apparatus of claim 8, wherein the fill-code generator is further adapted to notify the client that a time-out occurred.
10. The apparatus of claim 1, wherein the transaction identifiers further include a client ID and a client tag.
11. The apparatus of claim 1, wherein the first client is at least one of a processor, a memory, and an I/O device.
12. The apparatus of claim 1, wherein the second client is at least one of a processor, a memory, and an I/O device.
13. An apparatus, comprising:
 - a scoreboard comprising a plurality of locations adapted to store transaction identifiers each associated with a transaction, wherein each transaction comprises a first client sending a request to a second client, and wherein each transaction identifier includes a first timer flag and a second timer flag;
 - a timer adapted to compare the length of time the transaction identifiers remain in the scoreboard to a predetermined latency period; and

a fill-code generator adapted to initiate a time-out sequence when notified that at least one transaction identifier has remained in the scoreboard for substantially longer than the predetermined latency period.

14. The apparatus of claim 13, wherein the timer is a free-running timer.
15. The apparatus of claim 14, wherein the free-running timer is a cyclical timer adapted to return to a zero-point after the predetermined latency period.
16. The apparatus of claim 15, wherein the predetermined latency period ranges approximately from 6 nanoseconds to 28 seconds.
17. The apparatus of claim 13, wherein the fill-code generator is adapted to create a fill code and transmit the fill code to the first client when notified by the free running timer that at least one of the transaction identifiers has remained in the scoreboard longer than the predetermined latency period.
18. The apparatus of claim 17, wherein the fill-code generator is further adapted to notify the client that a time-out occurred.
19. A method, comprising:
storing at least one transaction identifier in at least one of a plurality of locations in a scoreboard, wherein the at least one transaction identifier is associated with a transaction, wherein each transaction comprises a first client sending a request to a second client in a system, and wherein each transaction identifier includes a first timer flag and a second timer flag;
timing a selected duration; and initiating a time-out sequence if the selected duration is substantially longer than a predetermined latency period.

20. The method of claim 19, wherein timing the selected duration comprises comparing a period of a free running timer to approximately the length of time a transaction identifier remains in the scoreboard.
21. The method of claim 20, wherein comparing comprises detecting transaction identifiers that have been stored in the scoreboard during a previous period of the free-running timer.
22. The method of claim 21, wherein detecting transaction identifiers that have been stored in the scoreboard during a previous period of the free-running timer comprises examining a the first timer flag when the free-running timer reaches a zero point.
23. The method of claim 22, wherein detecting transaction identifiers that have been stored in the scoreboard during a previous period of the free-running timer further comprises setting the first timer flag when the first timer flag has not been set and setting a the second timer flag when the first timer flag has been set.
24. The method of claim 23, wherein comparing further comprises determining when a transaction identifier has been stored in the scoreboard for substantially longer than one cycle of the free-running timer.
25. The method of claim 24, wherein determining when a transaction identifier has been stored in the scoreboard for substantially longer than one cycle of the free-running timer comprises determining if the second timer flag has been set when the free-running timer reaches the zero point.
26. The method of claim 19, wherein timing the selected duration comprises comparing a period of a free running timer to approximately the length of time since the first client sent the request.

27. The method of claim 19, wherein initiating a time-out sequence comprises notifying a fill-code generator that the transaction identifier in at least one location has remained in the scoreboard for substantially more than one period of the free-running timer.
28. The method of claim 27, wherein initiating a time-out sequence further comprises generating a fill code.
29. The method of claim 28, wherein initiating a time-out sequence further comprises transmitting the fill code to the first client.
30. The method of claim 29, wherein initiating a time-out sequence further comprises notifying the first client that a time-out has occurred.
31. A method, comprising:
 - storing at least one transaction identifier in at least one of a plurality of locations in a scoreboard, wherein the at least one transaction identifier is associated with a transaction, wherein each transaction comprises a first client requesting data from a second client in a system, and wherein each transaction identifier includes a first timer flag and a second timer flag;
 - detecting approximately synchronously transaction identifiers that have been stored in the scoreboard during the previous period of a free-running timer having a period approximately equal to a predetermined latency period;
 - determining approximately synchronously when at least one of the transaction identifiers has been stored in the scoreboard for substantially longer than one cycle of the free-running timer;
 - and initiating approximately synchronously a time-out sequence if the transaction identifier remains in the scoreboard substantially longer than a predetermined latency period.

32. The method of claim 31, wherein detecting transaction identifiers that have been stored in the scoreboard during a previous period of the free-running timer comprises examining the first timer flag when the free-running timer reaches a zero point.
33. The method of claim 32, wherein detecting transaction identifiers that have been stored in the scoreboard during a previous period of the free-running timer further comprises setting the first timer flag when the first timer flag has not been set and setting the second timer flag when the first timer flag has been set.
34. The method of claim 31, wherein determining when a transaction identifier has been stored in the scoreboard for substantially longer than one cycle of the free-running timer comprises determining if the second timer flag has been set when the free-running timer reaches the zero point.
35. The method of claim 31, wherein initiating a time-out sequence comprises notifying a fill-code generator that the transaction identifier in at least one location has remained in the scoreboard for substantially more than one period of the free-running timer.
36. The method of claim 35, wherein initiating a time-out sequence further comprises generating a fill code and transmitting the fill code to the first client.
37. The method of claim 36, wherein initiating a time-out further comprises notifying the first client that a time-out has occurred.
38. The apparatus as recited in claim 3, wherein the free-running timer is configured to examine the first timer flag when the free-running timer reaches a zero point.

39. The apparatus as recited in claim 38, wherein the free-running timer is configured to set the first timer flag when the first timer flag has not been set and set the second timer flag when the first timer flag has been set.
40. The apparatus as recited in claim 39, wherein the free-running timer is configured to determine when a transaction identifier has been stored in the scoreboard for substantially longer than one cycle of the free-running timer by examining the second timer flag.
41. The apparatus as recited in claim 14, wherein the free-running timer is configured to examine the first timer flag when the free-running timer reaches a zero point.
42. The apparatus as recited in claim 41, wherein the free-running timer is configured to set the first timer flag when the first timer flag has not been set and set the second timer flag when the first timer flag has been set.
43. The apparatus as recited in claim 42, wherein the free-running timer is configured to determine when a transaction identifier has been stored in the scoreboard for substantially longer than one cycle of the free-running timer by examining the second timer flag.

X. EVIDENCE APPENDIX

No evidence submitted under 37 C.F.R. §§ 1.130, 1.131, or 1.132 or otherwise entered by the Examiner is relied upon in this appeal.

XI. RELATED PROCEEDINGS APPENDIX

There are no related proceedings.